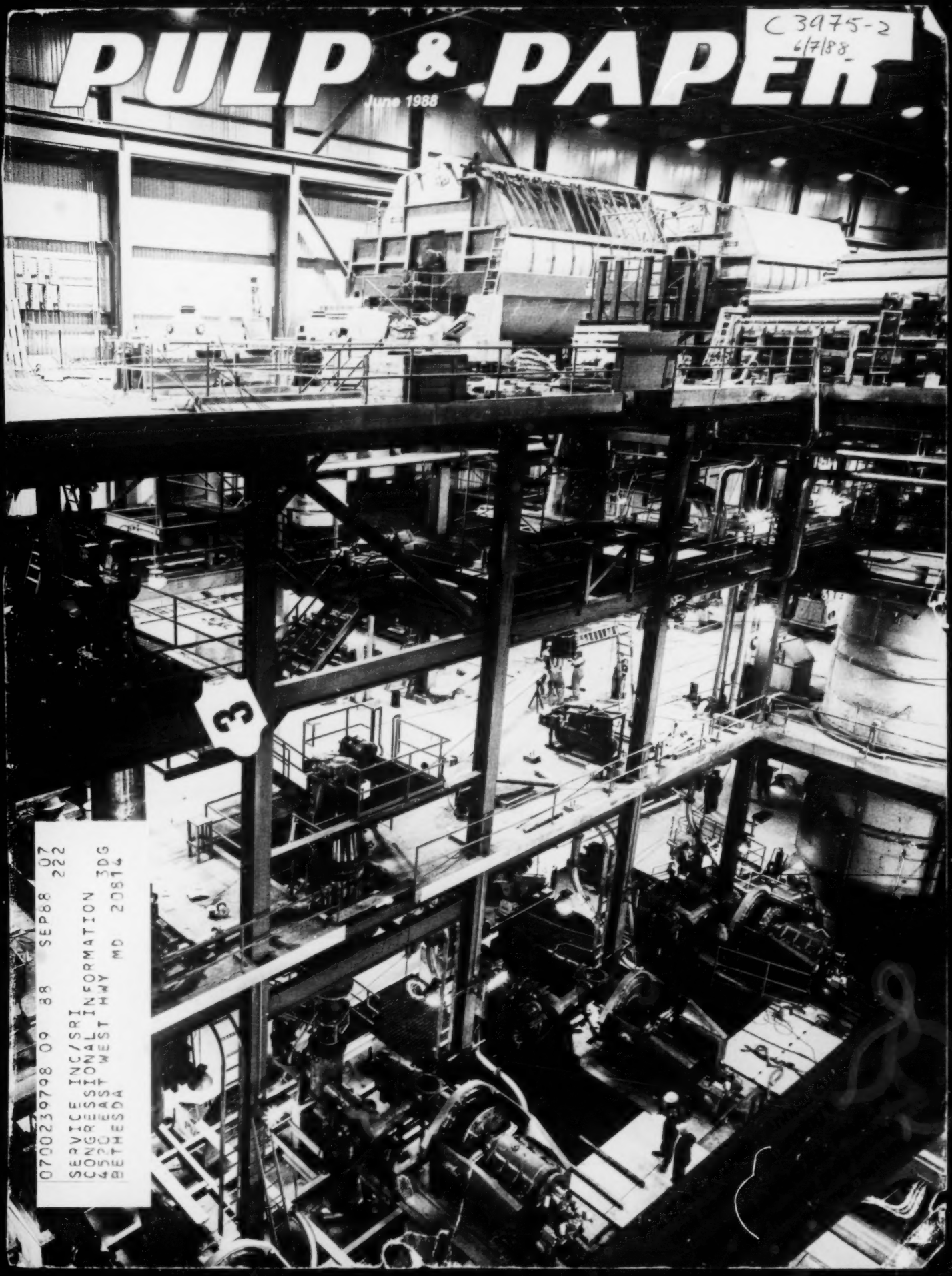
PULP & PAPER

June 1988



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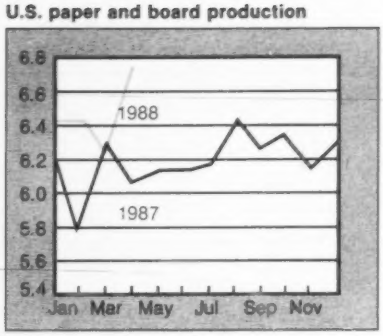
U.S. paper and board production



U.S. production of paper and paperboard totaled a record 6.7 million tons in March, up 7.1% from March 1986, according to American Paper Institute data. On a seasonally adjusted basis, the production rate for the first quarter was 76.8 million tpy, up 5.3% from the pace set in the first quarter of 1986. Paper production was at a seasonally adjusted 38.5-million-tpy rate, up 5.9%, and paperboard at 38.4 million tpy, up 4.6%.

Among major grades, printing and writing papers were up 9.9% in March from a year earlier, mostly on the strength of continued year-over-year gains for coated papers and uncoated free-sheet. Demand was strong from publishers and commercial printers. Containerboard production for domestic use rose 6.3% for the first quarter, and production of unbleached kraft linerboard for export climbed 21.0%. Unbleached kraft linerboard exports declined 16% in February.

Canadian newsprint shipments totaled 881,000 metric tons in March, up 4.1% from the previous year, according to the Canadian Pulp & Paper Assn. Woodpulp shipments declined 5.6% to 748,000 tons. Operating rates continued virtually at capacity for both newsprint and pulp. ■

	Latest month (000 short tons)		% change from year ago	Annualized year-to-date (000 short tons)	% change from year ago
PAPER & PAPERBOARD PRODUCTION[1]					
Newsprint	March	510	7.4	5,950	5.8
Uncoated groundwood (s)	March	142	2.9	1,582	-0.7
Coated paper (s)	March	653	19.2	7,522	14.9
Uncoated free sheet (s)	March	1,019	10.9	11,522	9.6
Other printing/writing	March	128	8.5	1,477	6.0
Total packaging and other paper (s)	March	454	1.3	5,316	0.2
Tissue	March	474	6.3	5,428	4.3
Total paper	**March**	**3,380**	**9.4**	**38,797**	**7.0**
Unbleached kraft paperboard	March	1,696	8.8	19,595	8.2
Semichemical medium	March	492	0.2	5,739	1.6
Bleached paperboard	March	388	-0.5	4,537	1.6
Recycled paperboard	March	774	2.7	8,965	5.8
Total paperboard	**March**	**3,349**	**4.9**	**38,831**	**5.9**
Total U.S. paper and paperboard output	**March**	**6,730**	**7.1**	**77,628**	**6.5**
PULP, WASTEPAPER & FIBER[2]					
Total U.S. woodpulp production	Feb.	4,920	6.6	61,175	5.4
Market pulp production	Feb.	687	15.5	8,458	11.7
Wastepaper consumption at paper/board mills	Feb.	1,504	9.0	18,430	5.4
Pulpwood consumption (cords)	Feb.	7,743	2.7	95,796	2.4
CONVERTED PRODUCTS STATISTICS[3]					
Corrugated box shipments (billion ft²)	March	27.222	9.5	76.778[6]	6.1
Containerboard inventories at U.S. box plants and mills	Mar. 1	2,589	8.3		
INTERNATIONAL TRADE[2]					
U.S. paper imports (including products)	Feb.	1,021	5.3	12,275	0.3
Imports of Canadian newsprint	Feb.	675	0.3	8,304[6]	-4.5
U.S. paper exports (including products)	Feb.	455	9.6	5,681	14.8
Exports of unbleached kraft linerboard	Feb.	168	-18.0	1,908	-15.8
Exports of woodpulp	Feb.	444	19.4	5,009	23.1
Norscan pulp inventories[4]	Mar. 31	805	-7.2		
Norscan pulp operating rates[4]	March	102%	101%	101%	101%
CANADIAN STATISTICS[5] *(reported in metric tons)*					
Total newsprint shipments	March	881	4.1	2,379[6]	1.1
Operating rates	March	100%	100%	100%	100%
Inventories held by U.S. consumers	Mar. 31	1,521	11.3		
Other paper/board shipments	March	589	7.5	1,642	4.2
Woodpulp shipments (export only)	March	748	-5.6	2,003	0.5
Operating rates	March	99%	98%	98%	98%

1. American Paper Institute. 2. API, Bureau of Census, American Pulpwood Assn. 3. Fibre Box Assn., Paperboard Packaging Council. 4. North American/Scandinavian paper-grade market pulp. 5. Canadian Pulp & Paper Assn. 6. Not annualized. (s) = Shipments.

Recycled paperboard: Prices are improving

Grade Structure: Recycled paperboard is made primarily from secondary fiber and is produced on either a fourdrinier, multi-ply, or cylinder paper machine. Grades include folding boxboard, corrugating medium, linerboard, gypsum liner, and core/can/tube stock.

Markets: Market demand for recycled paperboard grades, as measured by their 1988 capacity share, is as follows: folding boxboard, 28.5%; setup boxboard, 2.9%; corrugating medium, 18.6%; gypsum linerboard, 14.8%, linerboard, 6.2%; container chipboard and filler board, 0.5%; core/can/tube stock and other paperboard, 28.5%.

Production/Capacity: Production increased 6.3% to 8.60 million short tons in 1987. Demand continued to be strong in early 1988, with total recycled boxboard production ahead 6.1% through the first two months compared with a year earlier. Capacity increased just 2.7% in 1987. Mills operated at about 93% of capacity, compared with about 90% in 1986. This year, capacity is expected to rise 2.1% to 9.45 million tons while demand is to increase at a slower 1.6% rate.

An additional 277,000 tons of capacity is scheduled for startup by 1990, mostly in the corrugating medium, linerboard, and folding boxboard grades. These expansions include the conversion of two paper machines that previously produced other products to the manufacture of recycled paperboard, as well as more than twenty machine rebuilds and restarts in the industry.

Outlook: Recycled paperboard continues to show surprising strength across the board, with all major grades showing improvement in 1988. The strongest growth areas were recycled linerboard and corrugating medium.

Demand for gypsum liner is expected to weaken slightly in 1988 due to a slowdown in general construction activity. Core/can/tube stock should fare slightly better, as the country's overall industrial production remains steady in 1988. Setup boxboard demand should also remain healthy this year due to continued interest in specialty products.

Producers of recycled boxboard for folding cartons increased output by 5.4% in 1987. The increasing prices for solid bleached sulfate (SBS) grades were also partially responsible for some substitution of clay-coated recycled grades for SBS, which gained only 4.2% in 1987. Continuing strong demand for consumer packaging and rising prices for SBS have benefited recycled boxboard producers early in 1988. However, total folding carton demand is forecast to grow only 1.5% in 1988.

Prices: Prices for recycled folding carton stock improved considerably throughout 1987 and into the first half of 1988.

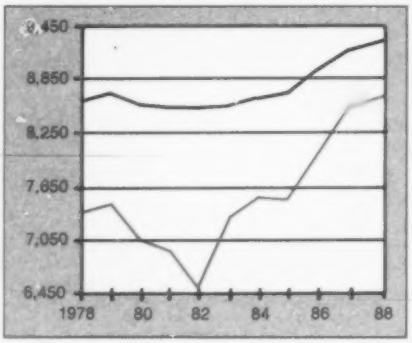
This year, producers raised prices $20 to $30/ton for recycled folding carton grades during the first quarter. This raised transaction levels for 20-point clay-coated grades to about $420 to $440/ton in the East, $440 to $460/ton in the Midwest, and as high as $490/ton in the West. Uncoated chipboard prices increased to about $350/ton. Most producers have announced another $25 to $30/ton price increase for June and July.

Despite the improvement of prices over the past two years, several major producers have sold all or portions of their recycled paperboard businesses because of poor profitability.

Price trends ($/short ton, year-end) for clay-coated 20-point folding carton boxboard (rolls) are as follows: 1975, $257; 1976, $262; 1977, $284; 1978, $305; 1979, $355; 1980, $380; 1981, $400/$425; 1982, $380/$425; 1983, $370/$425; 1984, $375/$425; 1985, $350/$400; 1986, $380/$420; 1987, $400/$440. Bending 20-point chipboard (rolls): 1975, $204; 1976, $212; 1977, $219; 1978, $225; 1979, $260; 1980 $260/$275; 1981, $270/$280; 1982, $280; 1983, $280/$300; 1984, $300; 1985, $300; 1986, $320; 1987, $330.

Correction. The April 1988 Grade Profile discussing uncoated freesheet should be revised to exclude bristols capacity for International Paper Co., 1.9 million tons (16.1%), and Champion International Corp., 1.2 million tons (10.2%), lowering market share of the top five companies to 48.8% and the top ten to 74.9%.

SUPPLY/DEMAND (000 tons)



FORECAST (000 tons)

	1986	1987e	1988e
Production	8,083	8,594	8,736
Capacity	9,008	9,252	9,446
Utilization rate	89.7	92.9	92.5
Imports	95	151	143
Exports	70	60	67
Apparent U.S. consumption	8,108	8,685	8,812
lb/capita	67.33	71.46	71.85
GNP ratio[1]	2.18	2.26	2.26

e = Estimate.
1. 1,000 tons/$billion real GNP.

TOP U.S. PRODUCERS (000 tpy)

	Annual capacity	Market share (%)
1. Jefferson Smurfit[1]	1,220	12.9
2. Sonoco Products[2]	750	7.9
3. Newark Group	610	6.5
4. Rock-Tenn[3]	532	5.6
5. Caraustar	480	5.1
6. Inland Container	475	5.0
7. Waldorf	380	4.0
8. U.S. Gypsum	377	4.0
9. National Gypsum	320	3.4
10. Packaging Corp.	210	2.2

Market share of top five companies:
38.0%

Market share of top ten companies:
56.6%

Total U.S. capacity (1988):
9.446 million short tons

1. Reflects completed merger with Container Corp. of America.
2. Acquired Federal's Richmond, Va., mill in 1988.
3. Acquired Mead's Lynchburg, Va., Cincinnati, Ohio, and Otsego, Mich., mills in 1987.

Publication papers strong. Mead Corp. characterized its first-quarter results as "far and away the best first quarter in our history." The company observed that although its production reached record levels, backlogs were continuing to increase in several major product lines and prices have strengthened.

Bowater Inc. had record sales and earnings for the quarter. It had the biggest increase in profits of any firm surveyed and has announced new capital spending plans.

Boise Cascade Corp. enjoyed record profits for the quarter, thanks to successful price increases on every major grade of paper produced by the company. Chairman and CEO John Fery expects a record performance for the company in 1988. Boise is planning to spend $400 million on capital projects in 1988—a 50% jump over 1987.

Tissue producers gain. Scott Paper Co.'s sales and income both reached record levels for the first quarter. The profits from Scott's U.S. tissue operations (both consumer and commercial) rose 23% on a 13% increase in sales. Recently announced price increases on both consumer and commercial tissue products will help second-quarter results.

James River Corp.'s profits rose 18% for the quarter. The company said substantial earnings increases occurred in the communication papers, paperboard packaging, and specialty papers business. Earnings for the towel and tissue segment and the disposable food service business were flat due to competitive market conditions. Profits decreased in the flexible packaging business, primarily due to lags in passing through continued rapid increases in plastic resin costs, James River said.

Fort Howard Corp. enjoyed a 52% increase in earnings despite rising prices for wastepaper and polystyrene resin. The company said its national account sales of food service and disposable products are recovering. ■

U.S. paper industry results.

	First quarter ($000)			
Companies	**Sales**	**Change 1988/87**	**Earnings[1]**	**Change 1988/87**
Boise Cascade Corp.	$ 1,016,310	11.4%	$ 68,540	70.7%
Bowater Inc.	343,140	21.7	37,974	221.5
Champion International	1,266,070	15.4	101,974	83.8
Chesapeake Corp.	161,297	3.8	9,900	133.9
Consolidated Paper Corp.	231,067	32.1	39,526	79.8
Federal Paper Board Co.	245,501	6.8	21,868	100.0
Fort Howard Paper Co.	426,859	8.3	36,296	52.1
Georgia-Pacific Corp.	2,115,000	14.0	106,000[2]	32.5
P.H. Glatfelter Co.	136,147	85.3	18,362	49.9
Great Northern Nekoosa Co.	843,900	48.9	78,300	80.8
International Paper Co.	2,300,000	27.8	159,000[2]	76.7
James River Corp. (1/21)	1,237,725	17.0	49,213	18.0
Jefferson Smurfit Corp.	312,960	22.3	32,407	121.0
Kimberly Clark Corp.	1,294,000	9.4	93,000	24.2
Longview Fibre Corp. (1/31)	137,131	3.2	16,435	16.9
Louisiana-Pacific Corp.	483,000	14.2	30,800[2]	89.0
Mead Corp.	1,085,300	13.4	65,800[2]	92.4
Mosinee Paper Corp.	58,932	16.4	1,636	73.1
Pentair Inc.	194,336	−1.7	8,883	142.8
Pope & Talbot Inc.	115,731	15.4	7,957	19.6
Potlatch Corp.	258,220	3.9	26,495	49.0
Scott Paper Co.	1,126,400	17.7	74,000	51.0
Sonoco Products Co.	376,212	51.6	22,250	45.5
Stone Container Corp.	881,300	50.4	65,300	150.2
Temple-Inland	425,700	9.0	45,600	35.3
Union Camp Corp.	645,389	18.6	67,554	52.8
Wausau Paper Mills Co. (2/29)	68,405	13.2	3,566	29.0
Westvaco Corp. (1/31)	501,330	13.7	37,644	93.1
Weyerhaeuser Co.	1,855,462	14.7	114,193	12.0
Willamette Industries Inc.	404,757	25.3	40,376	76.0
Total	**$20,547,581**	**18.6%**	**$1,481,149**	**58.5%**

1. Income after taxes from continuing operations, excluding most significant nonrecurring items in both years.
2. **Georgia-Pacific Corp**.: 1987 quarter excludes a $6-million pretax gain from liquidation of investments. **International Paper Co.:** 1987 quarter includes a $14-million pretax gain from the sale of securities. **Louisiana-Pacific Corp.:** 1988 quarter excludes nonrecurring gains of $146.0 million from settlement of timberland dispute and $15.7 million from sale of the Container Products Div. of Fibreboard Corp. **Mead Corp.:** 1988 quarter includes an $11-million gain from sale of recycled board business.

Canadian profits up 41%, but currency squeezes profits

Canadian forest products companies enjoyed a 41.6% increase in profits on a 10.9% increase in sales. Unlike their U.S. counterparts, however, Canadian producers were not so optimistic about the prognosis for 1988, primarily because the appreciating Canadian dollar is making the U.S. market a less-profitable place for Canadians to do business. Ongoing labor negotiations at pulp, paper, and sawmills in British Columbia also have some companies feeling uneasy. Pulp and newsprint markets remain tight, and several companies have committed to big capital spending agendas.

During March and April, the Canadian dollar averaged about 81¢ compared with the 76¢ it was worth in fourth-quarter 1987. For all of 1987 the Canadian dollar's average worth was 75.5¢ to the U.S. dollar—a 4.9% increase over 1986 levels. Canadian companies are doing something about their dependence on the U.S. by expanding offshore. Abitibi-Price Inc., Noranda Forest Inc., and Consolidated-Bathurst Inc. are pursuing investments in Australia, Venezuela, and People's Rep. China, respectively.

Adam Zimmerman, chairman of Noranda Forest Inc., said that he expects the current strong market conditions to generally continue throughout 1988. Noranda's profits were 49% above the 1987 quarter. The 54-day

strike at the Thurso, Que., mill and the strong Canadian dollar reduced the company's profits by C$10 million. Zimmerman noted that "there is every reason for optimism that labor negotiations will be concluded amicably and promptly."

Abitibi-Price Inc. reported that its earnings were more than double the 1987 quarter. Chairman and CEO Bernd Koken told shareholders that the company's newsprint group was benefiting from the price increase implemented at the beginning of 1988. He also cited improved contributions from the groundwood papers, coated papers, and distribution operations. Koken said he was optimistic Abitibi would achieve solid earnings growth in 1988 but admitted he was concerned about the detrimental effect of a strengthening Canadian dollar.

MacMillan Bloedel Ltd., which is 50% owned by Noranda Forest, enjoyed a 52% improvement in earnings. Earnings were helped by first-quarter price increases for newsprint, pulp, and linerboard. Prices for premium lumber grades, especially offshore, have also been strong. These factors helped to offset higher log costs, a higher Canadian dollar, and lower-than-planned newsprint production due to maintenance and startup projects.

Domtar Inc. reported earnings fell about 16%, mainly due to a significant decline in results from construction materials due to lower U.S. prices for gypsum wallboard. Profits were hurt by the strike at the hardwood pulp mill in Lebel-sur-Quevillon, Que., which began in February. Domtar said the strike rendered it unable to capitalize on strong pulp markets and hurt the Fine Paper Div., which experienced pulp shortages.

Consolidated-Bathurst Inc. saw its earnings increase 61% in the quarter on a 9.3% increase in sales. The company said improved prices in most product lines offset lower shipments of newsprint in the first quarter and the effects of the strong Canadian dollar. Con-Bath said profits were helped by its Bridgewater Paper Co. Ltd. subsidiary, which is now the largest newsprint supplier in the U.K.

British Columbia Forest Products Ltd. enjoyed the highest quarterly earnings in its history. CEO Ian Donald characterized the short-term outlook as "bullish" but warned that an "aggressive reinvestment program is necessary to keep the company competitive." BCFP and its affiliates plan to spend a record C$1 billion on projects to "stay internationally competitive in this global business." Donald noted that the rising value of the Canadian dollar "jeopardizes the company's ability to compete in offshore markets and added that the effect of each 1¢ increase in its value results in a $5-million reduction in earnings for BCFP." ■

Canadian paper industry results.

Companies	First-quarter 1988 (C$000) Sales	Change 1988/87	Earnings[1]	Change 1988/87
Abitibi-Price Inc.	$800,000	15.0%	$44,100	101.4%
B.C. Forest Products	356,000	6.0	45,400	38.8
Canfor Corp.	295,100	0.1	29,000	40.1
Cascades Inc.	140,000	8.5	7,400[2]	15.6
Consolidated Bathurst Inc.	562,600	9.3	53,100	60.9
Domtar Inc.	673,000	11.4	37,000	−15.9
Donohue Inc.	155,900	40.6	15,100	68.8
Great Lakes Forest Products	209,052	14.2	33,497	70.4
MacMillan Bloedel Ltd.	796,500	10.7	91,600	51.7
Noranda Forest Inc.	1,075,000	8.1	62,900	49.1
Repap Enterprises Corp. Inc.	256,100	10.9	18,100	42.5
Rolland Inc.	114,600	20.4	1,775	17.8
Scott Paper Ltd.	81,923	8.7	3,946	8.1
Weldwood of Canada Ltd.	208,925	16.0	15,538	20.8
West Fraser Timber	102,000	10.0	11,100	−7.5
Total	**$5,845,700**	**10.9%**	**$469,556**	**41.6%**

1. Income after taxes, from continuing operations, excluding most significant nonrecurring items in both years.
2. **Cascades:** 1988 figures are preliminary company estimates.

EXPANSIONS

Repap to install new coated unit and pilot pulp mill

Repap Enterprises Corp. Inc. of Montreal, Que., announced that it will build a second coated paper machine at its Miramichi pulp and paper mill in Newcastle, N.B. The company also said it will build an ethanol-based pilot pulp mill at the mill. The two projects are expected to cost about C$435 million.

The new machine will have capacity for between 200,000 and 260,000 metric tpy of coated paper, depending on what grade is made. It will more than double the facility's coated paper capacity, Repap said. The unit will be able to produce both coated groundwood and coated free-sheet paper. The company said financing arrangements are being finalized. Repap installed a 220,000-metric-tpy lightweight coated groundwood machine at the mill in summer 1986. The mill currently has capacity for about 550 tpd of bleached and unbleached kraft market pulp. The new machine comes onstream late next year. Repap also plans to install a low-odor chemical recovery boiler at Miramichi to recover chemicals and burn byproducts in order to produce steam and electricity.

Repap is also in the process of installing a 205,000-short-tpy coated free-sheet paper machine at its Midtec Paper Inc. subsidiary in Kimberly, Wis. Startup is slated for September. The machine will replace some older units.

Construction starts on pulp line. In addition to these expenditures, Repap said it will spend about C$45 million to install a pilot pulp plant and associated R&D facilities at Miramichi. Operating costs of the ethanol-based pulp line will come to about $20 million. The Canadian government has committed to contributing half of the total cost of the project as long as certain conditions are met. The pilot plant will use Repap's proprietary Alcell ethanol-based pulping process and will have capacity for about 11,000 metric tpy. Startup is slated for first-quarter 1989.

The pilot plant is the culmination of years of research by Repap. The Alcell process does not use sulfur to separate the lignin from the cellulose. Rather, the woodchips are placed in an ethanol and water solution and